

IN THE CLAIMS

Please amend the claims as follows:

1-6 (Cancelled)

7. (Currently Amended) A method for producing a positive electrode active material comprising:

a mixing step of mixing a plurality of substances to form a precursor, said substances providing a starting material comprising iron oxalate (FeC_2O_4), ammonium hydrogen phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$), lithium carbonate (Li_2CO_3) and iron powder (Fe) for synthesis of a compound represented by the general formula $\text{Li}_x\text{M}_y\text{PO}_4$ where x is such that $0 < x \leq 2$, y is such that $0.8 \leq y \leq 1.2$ and M includes at least one 3d transition metal consisting of Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu and Zn;

a deaerating step of removing air contained in said precursor obtained in said mixing step; and

a sintering step of sintering and reacting said precursor obtained by said deaerating step.

8-9 (Cancelled)

10. (Original) The method for producing a positive electrode active material according to claim 7 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is LiFePO_4 .

11. (Currently Amended) A method for producing a non-aqueous electrolyte secondary battery having a positive electrode containing a positive electrode active material capable of reversibly doping/undoping lithium, a negative electrode mounted facing said positive electrode and capable of reversibly doping/undoping lithium, and a non-aqueous electrolyte interposed between said positive electrode and the negative electrode, said positive electrode active material being produced by a method comprising:

~~a mixing step of~~ mixing a plurality of substances to form a precursor, said substances providing a starting material comprising iron oxalate (FeC_2O_4), ammonium hydrogen phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$), lithium carbonate (Li_2CO_3) and iron powder (Fe) for synthesis of a compound represented by the general formula $\text{Li}_x\text{M}_y\text{PO}_4$ where x is such that $0 < x \leq 2$, y is such that $0.8 \leq y \leq 1.2$ and M includes at least one of 3d transition metal consisting of Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu and Zn;

~~a deaerating step of~~ removing air contained in said precursor obtained in said mixing step; and

~~a sintering step of~~ sintering and reacting said precursor obtained in a state free of air by said deaerating step.

12-13 (Cancelled)

14. (Original) The method for producing a non-aqueous electrolyte secondary battery according to claim 11 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is LiFePO_4 .

15. (Currently Amended) A method for producing a positive electrode active material comprising:

a mixing step of mixing a plurality of substances to form a precursor, said substances providing a starting material comprising iron oxalate (FeC_2O_4), ammonium hydrogen phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$), lithium carbonate (Li_2CO_3) and iron powder (Fe) for synthesis of a compound represented by the general formula $\text{Li}_x\text{M}_y\text{PO}_4$ where x is such that $0 < x \leq 2$, y is such that $0.8 \leq y \leq 1.2$ and M includes at least one 3d transition metal consisting of Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu and Zn;

a deaerating step of removing air contained in said precursor obtained in said mixing step; and

a sintering step of sintering and reacting said precursor obtained by said deaerating step;

wherein an electrically conductive agent is added to said starting material for synthesis of said precursor.

16. (Original) The method for producing a positive electrode active material according to claim 15 wherein said electrically conductive agent is added in an amount of 0.5 to 20 parts by weight to 100 parts by weight of said $\text{Li}_x\text{M}_y\text{PO}_4$.

17. (Original) The method for producing a positive electrode active material according to claim 15 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is LiFePO_4 .

18. (Currently Amended) The method for producing a positive electrode active material according to claim 15 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$ $\text{LiFe}_y\text{Mn}_{1-y}\text{PO}_4$ and y is such that $0.8 \leq y < 1.2$.

19. (Currently Amended) The method for producing a positive electrode active material according to claim 15 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is $\text{Li}_x\text{Mn}_y\text{PO}_4$, ~~where~~ and x is such that $0 < x \leq 2$, and y is such that $0.8 \leq y \leq 1.2$.

20. (Original) The method for producing a positive electrode active material according to claim 15 wherein said electrically conductive agent is carbon.

21. (Currently Amended) A method for producing a non-aqueous electrolyte secondary battery having a positive electrode active material capable of reversibly doping/undoping lithium, a negative electrode mounted facing said positive electrode and capable of reversibly doping/undoping lithium, and a non-aqueous electrolyte interposed between said positive electrode and the negative electrode, wherein said positive electrode active material is ~~synthesized by~~ being produced by a method comprising:

~~a mixing step of~~ mixing a plurality of substances to form a precursor, said substances providing a starting material comprising iron oxalate (FeC_2O_4), ammonium hydrogen phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$), lithium carbonate (Li_2CO_3) and iron powder (Fe) for synthesis of a compound represented by the general formula $\text{Li}_x\text{M}_y\text{PO}_4$ where x is such that $0 < x \leq 2$, y is such that $0.8 \leq y \leq 1.2$ and M includes at least one 3d transition metal consisting of Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu and Zn;

~~a deaerating step of~~ removing air contained in said precursor obtained in said mixing step, and

~~a sintering step of~~ sintering and reacting said precursor obtained by said deaerating step, and wherein an electrically conductive agent is added to said starting material for synthesis or to said precursor to synthesize said positive electrode active material.

22. (Original) The method for producing a non-aqueous electrolyte secondary battery according to claim 21 wherein said electrically conductive agent is added in an amount of 0.5 to 20 parts by weight to 100 parts by weight of said $\text{Li}_x\text{M}_y\text{PO}_4$.

23. (Original) The method for producing a non-aqueous electrolyte secondary battery according to claim 21 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is LiFePO_4 .

24. (Currently Amended) The method for producing a non-aqueous electrolyte secondary battery according to claim 21 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is ~~$\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$~~ $\text{LiFe}_y\text{Mn}_{1-y}\text{PO}_4$ and y is such that $0.8 \leq y \leq 1.2$.

25. (Currently Amended) The method for producing a non-aqueous electrolyte secondary battery according to claim 21 wherein said $\text{Li}_x\text{M}_y\text{PO}_4$ is $\text{Li}_x\text{M}_y\text{PO}_4$, ~~where~~ and x is such that $0 < x \leq 2$ and y is such that $0.8 \leq y \leq 1.2$.

26. (Original) The method for producing a non-aqueous electrolyte secondary battery according to claim 21 wherein said electrically conductive agent is carbon.

27. (Original) The method of claim 7, wherein an inert gas is introduced in an vacuum atmosphere to remove air contained in said precursor.

28. (Currently Amended) The method of claim 7, wherein a solvent is introduced along with ~~said~~ an inert gas to remove air contained in said oven.

29. (Original) The method of claim 11, wherein an inert gas is introduced in an vacuum atmosphere to remove air contained in said precursor.

30. (Currently Amended) The method of claim 11, wherein a solvent is introduced along with ~~said~~ an inert gas to remove air contained in said oven.